JERSEY WIRE LATH

THE ACKNOWLEDGED STANDARD

Kinkora Works at Roebling, New Jersey, (10 miles from Trenton).
John A. Roebling's Sons Company and The New Jersey Wire Cloth Company
Main Office, Trenton, New Jersey

CATALOGUE No. 1515

Jersey Wire Lath

FORMERLY: ROEBLING WIRE LATH

The Acknowledged Standard

The best plaster foundation for all classes of buildings

TRADE JERSEY MARK

Made only by

The New Jersey Wire Cloth Company

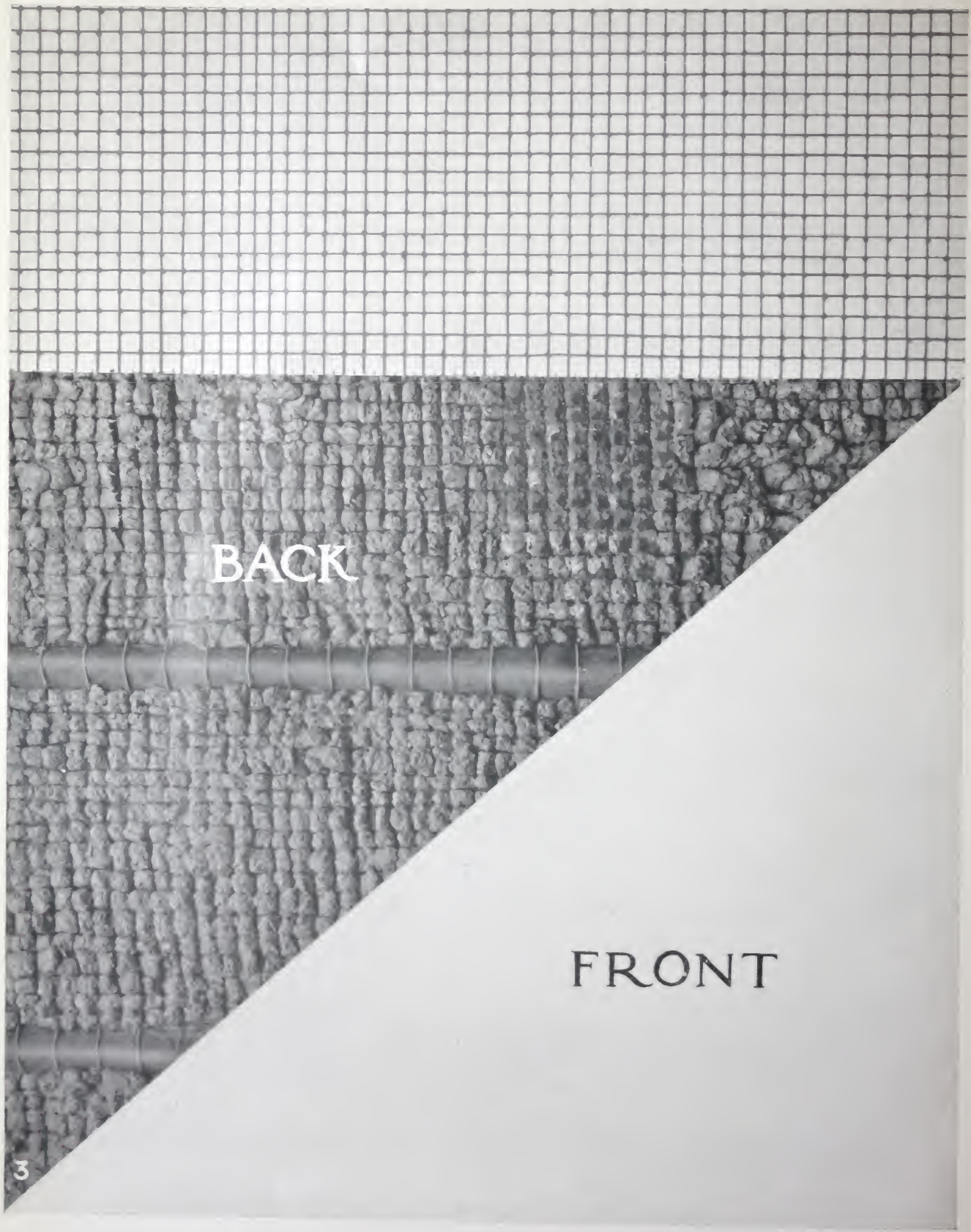
Trenton, New Jersey, U. S. A.

Offices and Stores:

New York
210 Fulton Street

Philadelphia
223-227 Arch Street

Boston, Mass.
93-95 Pearl Street



Jersey Wire Lath showing back and front of plaster (about one-third actual size)

Introduction

(See Special Notice on next page about the name "Jersey")

JERSEY Wire Lath is the most satisfactory foundation for the plaster of side walls, partitions and ceilings of rooms, and for carrying cement rough-cast or stucco finish of exterior walls of buildings. Since its introduction, more than thirty years ago, this Wire Lath has gained in favor every year and is today the acknowledged standard.

Many years ago special structures were erected to test the fire resisting qualities of walls made of our Wire Lath and plaster. These walls were subjected to severe trial by fire and water, and met with the approval of experts in scientific construction, superintendents of numerous building departments, representatives of insurance companies, architects and practical contractors. In the great Baltimore fire, in 1904, and at the time of the earthquake and fire in San Francisco, in 1906, numerous buildings, in which our Wire Lath was used, were exposed to fire, water and vibration and proved the practical service of the material. Our Wire Lath can be specified throughout the United States and Canada, as it conforms to, and is given preference in all the building codes.

While at first wire lath was employed mainly in large fireproof structures, in which fields it is the dominating choice today, it is rapidly superseding the combustible and unscientific wood lath in general building construction. With the increasing demand have come lower prices, while the cost of wood lath has increased with the growing scarcity of lumber.

To bring the superior advantages of our Wire Lath to the attention of the public in a practical way, the Roebling Construction Company was organized over twenty years ago, to execute contracts for fireproof construction employing our Wire Lath, and to give reliable information and assistance to all investigators and users, particularly to those who desired to contract for applying wire lath. This company was a subsidiary of The New Jersey Wire Cloth Company, of Trenton, N. J.

The Roebling Construction Company engaged in extensive operation in all the leading cities of the country, and scores of the finest buildings, public and private, will stand through many decades as monuments of the integrity of its work. A list of the buildings in the United States, Canada and Mexico, containing our Wire Lath would be so long that it is impractical to publish it. Beyond the reach of argument, these splendid buildings demonstrate the practicability of Jersey Wire Lath as an economic proposition.

The object for which it was organized having been attained, the Roebling Construction Company retired from business in 1915, and surrendered to this company the wire lath business,

together with the accumulated information, engineering data, etc., which had been acquired. This information is now available for use of parties interested in Jersey Wire Lath, who are invited to address us for any desired assistance.

The illustrations included in this book are necessarily limited in number and scope, and such as are offered are selected as representing types of buildings in which Jersey Wire Lath has been used. Pictures of hundreds of others, in all sections of the country, could they be included, would be found equally distinctive.

In this book we have intentionally refrained from giving suggestions as to general building construction. It is our opinion that this should be left to the architects who can best determine what should be specified for each structure. We have aimed to satisfy those seeking reliable and detailed information regarding lathing material, with a view to inciting interest in the best wall construction.

Much that is printed in the following pages will seem superfluous to those who know the practical application and superiority of Jersey Wire Lath, and to many of whom we are indebted for many words of commendation, for which we acknowledge our appreciation.

THE NEW JERSEY WIRE CLOTH CO.

SPECIAL NOTICE
ABOUT
"JERSEY"

When Wire Lath was first introduced by The New Jersey Wire Cloth Company, it was sold as "Fire Proof Wire Lathing" but the name was changed to "Roebling Wire Lath" at the time of the organization of the Roebling Construction Company. In order to harmonize with the trade name "Jersey" of The New Jersey Wire Cloth Company it has been decided to apply the name "JERSEY" to Wire Lath and other products listed in this catalogue which were formerly known under the trade name of "Roebling." It should be understood that no change has been made in the specifications or quality of these products.

THE NEW JERSEY WIRE CLOTH CO.

The CENTURY DICTIONARY Defines Lathing:

"**Lathing**. n. [Verbal n. of *lath*, v]. A foundation of lath or other material on a wall or ceiling, under the plaster; also, the material used for such a foundation. Metallic lathing is now used in the form of perforated and corrugated sheet metal, rods, bars and wire netting. The last form, under the name of *woven wire lathing*, is the most usual kind. Such lathing is used in constructing fire-proof walls and ceilings, and in general to take the place of the common and **dangerous wooden lathing** for the support of plastering."

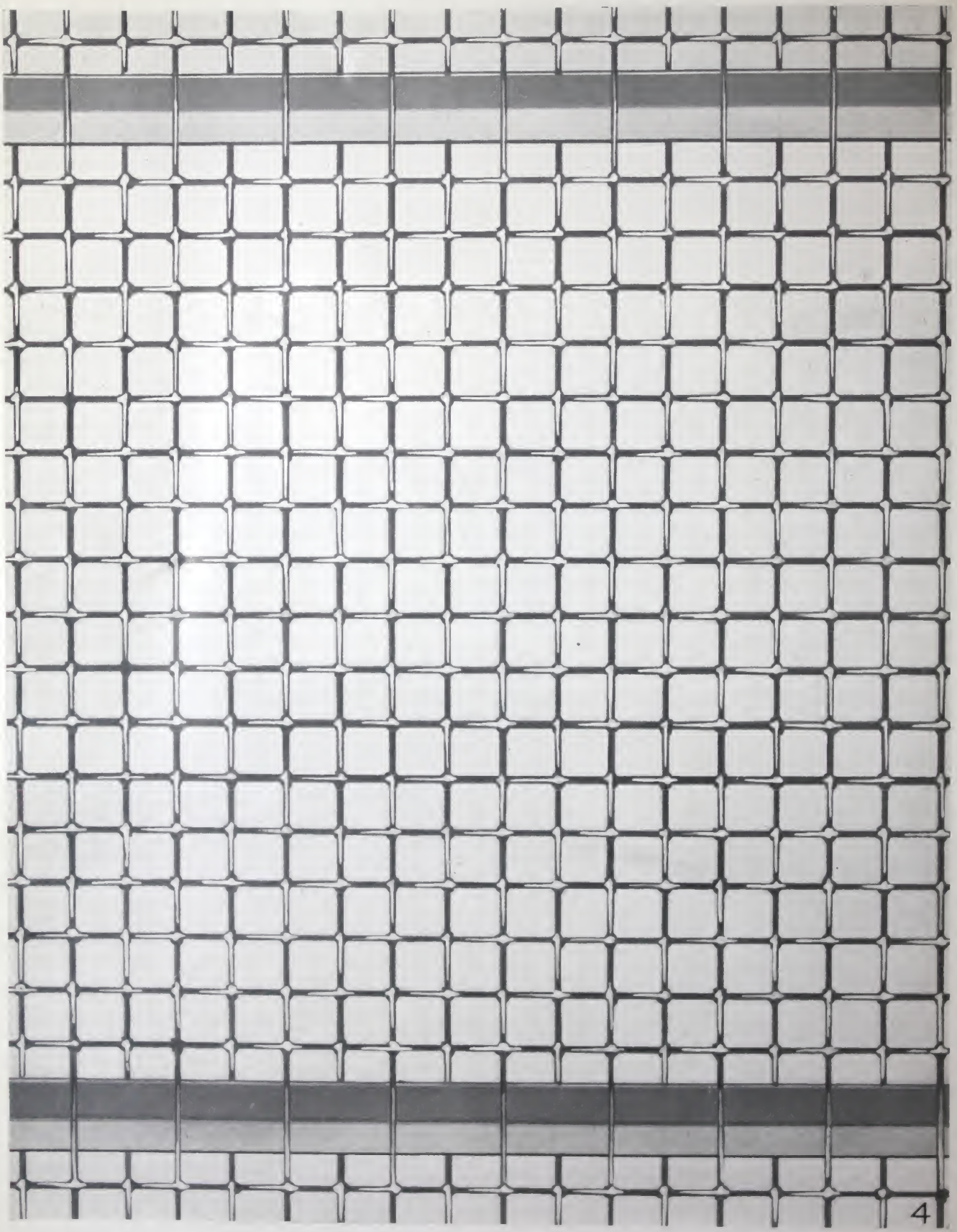
The Fundamental Fact

The unrivalled advantages possessed by Jersey Wire Lath over all other plastering foundations comes from the fact that the wires being of inconsiderable bulk, become imbedded in the plastic material when applied, with the result that the plaster forms practically a continuous surface on the back as well as the front (see illustration page 4). The bulk of the wall is made up of cement or plaster. It thus becomes practically impossible to disengage the cement or plaster in which Jersey Wire Lath is imbedded.

The lath and plaster are obviously more securely united than by means of the key that is formed where other lath, particularly wood, is employed, and is infinitely more secure than where the plaster is applied to material having a flat surface, and the two are held together only by adhesion.

Jersey Wire Lath is not combustible, and when properly plastered, the wall will resist the action of the elements and withstand vibration.

It can readily be computed that at the present price of material, Jersey Wire Lath constitutes a very small percentage of the cost of any building; hence it is an economic fallacy to use inferior material at a saving of a few cents per yard in the cost of the walls. At a critical time the lath might prove the weak link. Do not be deluded either by verbal or printed statement of some interested party who may try to influence the use of something else "just as good" as Jersey Wire Lath. It is safe to say that all who investigate its merits will decide in its favor, and it will therefore continue to be the choice of architects, and all who carefully consider building construction and demand the best.



Jersey Wire Lath with V ribs

Jersey Wire ~~Cloth~~ LATH

The Acknowledged Standard

JERSEY Wire Lath is a steel fabric with square holes. It is supplied with ribs of pressed steel, V shape, or solid round rods. These ribs, which serve both to position and reinforce the wire fabric, are woven into the fabric, under and over. They are a part of, and integral with, the lath itself. This is an important difference in construction enjoyed exclusively by Jersey Wire Lath. It is also made without ribs.

The wires are usually spaced four-tenths of an inch centers (holes about ⅜-inch square) giving what is technically termed 2½ mesh (5 wires to 2 inches). Also for some purposes, 2 mesh (½ inch centers) No. 18 wire, without ribs, is specified. Lath 2½ mesh, commonly used, is No. 20 wire, the diameter of the finished material being .035 inch. Also, the wire specified is something heavier, viz., No. 19 (.041) No. 18 (.047). As the breaking strain of No. 20 wire is at least 54 pounds for each strand, it will be noted that the strength of each foot fabric is 1,620 pounds or more—beyond any possible requirement. The ribs are usually ⅜-inch deep, although some lath is made with deeper ribs, viz., ½-inch, ⅝-inch, ¾-inch and 1-inch. The round ribs are usually 3/16-inch in diameter. All ribs are usually spaced ~~4~~ 3-inch centers. Two wires are woven in to form selvages. On page 26 will be found a list of widths carried in stock.

All Jersey Painted Lath is given a coat of black asphaltum paint in the roll, or is made of wire galvanized before weaving, (G. B. W.) or the fabric is galvanized after weaving (G. A. W.). For most purposes, it will be found advantageous to use the last. The galvanized coat renders the fabric absolutely proof against rust and contributes materially to its rigidity and strength; it also unites all the wires at their crossings by means of a small deposit left at each intersection. Thus the fabric is one solid surface with immovable wires. Beyond question, this should always be specified for use on exterior walls.

Jersey G. A. W. Wire Lath is galvanized by the hot process. A heavy deposit of zinc is applied (after the wire is cleaned) so that the two metals are thoroughly united. It is impossible to attain equal results by any other process of galvanizing. All wire used in G. B. W. lath (galvanized before weaving) is also coated by the hot process. The wire in Jersey Wire Lath, made of Open Hearth steel, is produced by John A. Roebling's Sons Co., whose Kinkora plant adjoins the works of The New Jersey Wire Cloth Company. The Roebling Company has facilities for producing wire from the crude metal to the finished wire, so large quantities of material, of uniform quality, and best adapted for our products, are always at hand. Jersey Wire Lath is woven on automatic power looms which insure symmetry in every particular.

In Jersey Wire Lath the greatest possible strength and rigidity are obtained and without excessive bulk or weight. In a drawn wire the ultimate strength of metal is attained.

Jersey Wire Lath Fire-proofing installed by Roebling Construction Company

6. Office Building of the United States Senate, Washington, D. C.

7. Hudson Terminal, New York

8. John Wanamaker Store, Philadelphia

9. Hotel Belmont, New York

Steel Construction

In the construction of steel frame buildings, vast quantities of Jersey Wire Lath have been used. It has been applied with satisfactory results in some of the largest and finest public and private buildings, including hotels, office buildings, governmental structures and residences in all of the large cities on the continent of North America. These buildings were constructed by well-known contractors, under the supervision of leading architects, who have often expressed themselves in words of commendation. At the present time Jersey Wire Lath is being specified for similar buildings by many authorities, who have carefully considered all kinds of material, and, undoubtedly, it will never be superseded.

It is used as a foundation for plaster for ceilings, the lath being attached to metal furring, which is fastened by one of the various methods to I-beams, and forms a continuous surface under beams and arches. For partitions, either solid or hollow, it recommends itself. The lath is tied to vertical iron bars, which are secured at the floor and ceiling. Also, it is often employed for cornices and false beams, which are formed of iron bent in the proper shape, to which wire lath is attached. It is often employed, too, as a foundation for hard finish composition floors, the lath being laid down over the rough floor and the composition afterwards applied.

The generally recognized exclusive advantage of wire lath comes from the fact that it can be applied in areas of large units, viz., in sections three feet or wider and 150 feet or less in length, thus reducing to a minimum the waste occasioned by laps and time required for applying.

Jersey Ceiling Hangers

FOR SECURING METAL FURRING TO I-BEAMS

Patented March 6, 1900

Standard size, 8 inches long for flanges of I-Beams 4 to 6 inches wide. Per 100, $

These hangers are made of steel plate, having one end bent to engage the flange of an I-beam. The long end is then bent over the opposite flange with a hammer. A section is punched therefrom and bent at right angles to form a depending arm with a seat "A" to support a bar of metal furring. These hangers securely hold the furring to the beams and are quickly applied. They have been extensively used by large contractors, with entire satisfaction.

Jersey Re-Enforcing Wire Fabric

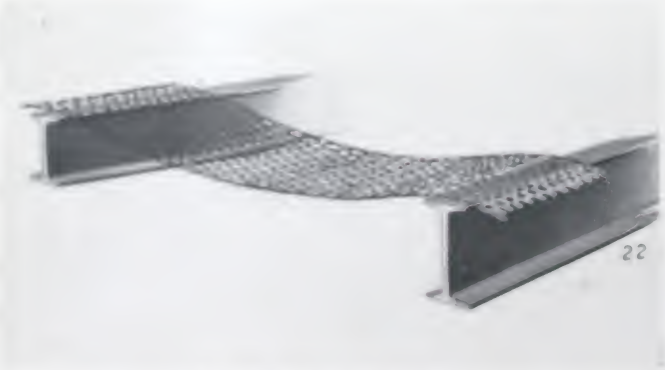
4 INCH x 7 INCH HEXAGON MESH, No. 10 (.135) GALVANIZED STEEL WIRE

Standard Bales 50 yards long, 54 inches (8½ meshes) wide

Per linear yard, cents

For the re-enforcement of concrete fireproof floors in conjunction with steel I-beams, this material is recommended. Temporary wood centering, to carry the concrete till it hardens, is first erected; then the fabric is rolled out and cut off in suitable lengths for the floor, allowing for a slight deflection of the fabric between the beams. When concreted, a flat arch is secured, to which the finished floor can be applied. Flat roofs can be obtained in like manner.

Section of fabric



As applied over steel beams

Full bale

Jersey Culvert Fabric

1 INCH x 2 INCH MESH. MADE OF GALVANIZED STEEL WIRE .128 INCH DIAMETER

Standard rolls 100 feet long, 36 inches wide

Per square foot, cents

This is used as a base for concrete culverts. A wood centering is first erected to form the arch. The fabric is then laid over the wood, or, some concrete may be deposited, and the fabric then can be laid so that it will be imbedded in the body of the concrete.

Many of the large railroads have used this material with complete satisfaction.

Modern Stucco Buildings in which Jersey Wire Lath is used

49. Cottage, Trenton, N. J.
10. Residence, Deal, N. J.
11. Hotel Alvarado, Albuquerque, N. M.
12. Residence, Deal, N. J.
13. Cottage at Lakewood, N. J.

Modern Stucco Buildings in which Jersey Wire Lath is used

15. Cottage at Lakewood, N. J.
16. Residence at Lakewood, N. J.
17. Cement Mill at Craigsville, Va.
18. Residence at Bernardsville, N. J.
19. Summer Home at Allenhurst, N. J.

Wood Construction

Wood framework for buildings has been regarded with favor for generations, and today, a wood frame covered with stucco outside and plaster inside, both applied on Jersey Wire Lath, possess advantages not found in any other kind of construction. The parts of all buildings, viz., studding, joists, floors, cornices, porches, casings, windows, doors, etc., are usually wood, and require the same attention, paint, etc., in all kinds of buildings, so a comparison should be confined only to the construction of the walls. Here ,also, it should be noted that, for this reason, in brick, stone, hollow tile and cement block buildings, the fire risk is not materially reduced.

The frame of many buildings erected a century ago is in good condition today, although the covering (shingles or boards) may have been painted many times or renewed; hence there is no question but what framework protected from the ravages of time and the elements will endure for ages. In Europe, wood frame rough cast buildings are now in good condition, which were constructed centuries ago, an example of which is shown below.

A wood frame, when properly covered, conforms with every requirement of a satisfactory structure. Such a building is inexpensive, even considering the increasing cost of wood timber, as the proportion of the timber cost in a building is inconsiderable. The cost of clapboards or shingle exterior, owing to the increased price of lumber as compared with lath and stucco approach each other so closely as to make the difference almost negligible in most sections. Such a building is quickly constructed with a corresponding reduction of the labor cost.

The walls are light in weight and rank with brick as fireproof construction. This is attested by the fact that insurance companies issue policies at the same rate of premium for both. The air space between the timbers acts as a non-conductor, rendering the interior dry in summer and warm in winter; also it affords space for various pipes and wires without specially constructed conduits. The exterior walls are not thick or ponderous, thus affording the maximum floor area. The stucco coating being solid, is impenetrable to air and water, and acts as a brace in all directions against the action of the wind.

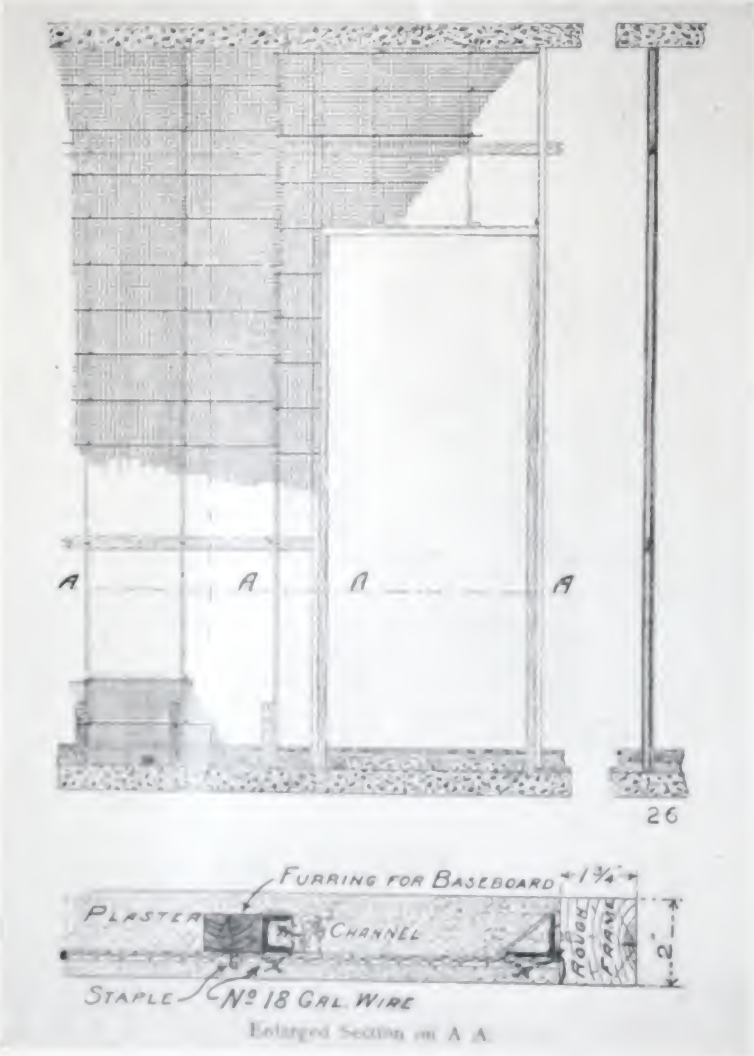
The facility with which stucco lends itself for artistic treatment is apparent. It can be employed for all kinds of buildings, from simple cottage to palatial residence, or large structure for public use. Stucco buildings may be designed after Colonial, Mission, Elizabethan half-timbered, and, in fact, most any of the present-day styles. It is exceedingly well adapted for garages and stables, in which buildings its fireproof qualities are especially appreciated.

A wood-frame structure covered with wood which has outlived its usefulness can be made attractive and again durable by employing wire lath and plaster over the exterior surface, giving the appearance of a new structure with stucco walls.

The advantages of using Jersey Wire Lath instead of wood lath for interiors are twofold, decreased fire risk and avoidance of accidents due to cracked or falling plaster. This axiom makes argument impossible.

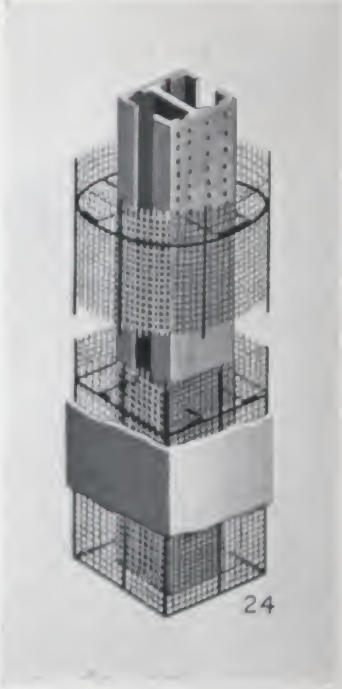
Half-timbered and rough-cast house in Cheshire, England, over 250 years old

Use of Wire Lath in Steel Construction

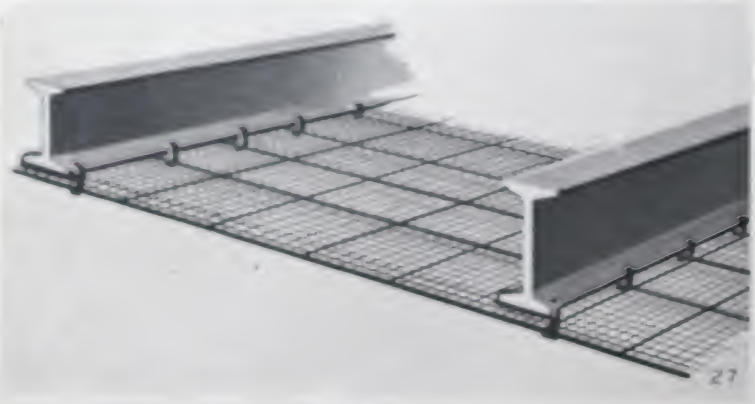


Enlarged Section on A A

Solid Partition



Column



Ceiling

False Beam

How to Apply Jersey Wire Lath in Steel Frame Buildings

No suggestions are included here regarding the iron work or furring, as specifications for same come within the domain of the architect. Some parties, however, may be interested in the information below, based on the practice of leading authorities as to the use of Wire Lath on steel frame structures. Wire Lath is usually applied by contractors exclusively engaged in putting up various kinds of lath, whose employees handle wire lath skilfully.

CEILINGS: The steel beams are furred on 12-inch or 16-inch centers (usually 16-inch) with light channels, flats, or angles clipped to the beams. (Illus. No. 27.) Jersey Wire Lath with ribs is then tied to the furring so that the ribs in the lath are at right angles to the furring. Wire lath is made 33-inch and 49-inch for furring 16-inch centers and 37-inch and 49-inch for 12-inch centers, which provides for a lap in either case.

PARTITIONS: For 2-inch solid partitions, studding of $\frac{7}{8}$-inch or 1-inch x $\frac{3}{16}$-inch channel iron or its equivalent in angles or flats is spaced 16 inch on centers. Jersey Wire Lath with ribs is then tied so that the ribs are at right angles to the studding. (Illus. No. 26.) The work is then plastered one side and back plastered on the other to a total thickness of 2 inches. A hollow partition is simply two partitions, as above, set parallel without the back plastering.

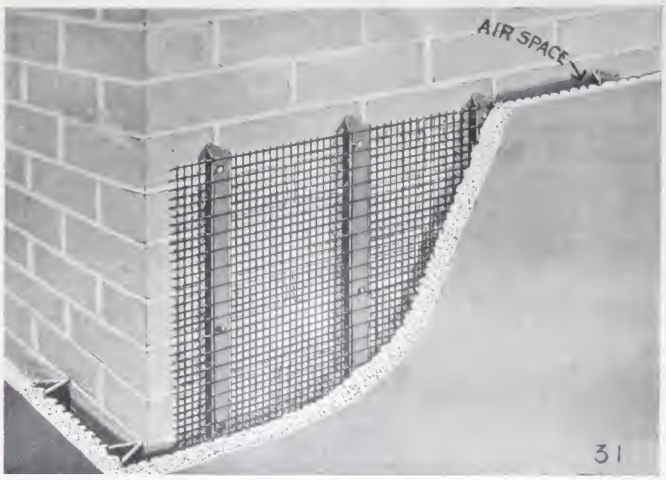
COLUMNS: These are furred out either round or square, as desired, furring being 12-inch or 16-inch centers around the column, and then Jersey Wire Lath is tied to the furring. (Illus. No. 24.)

CORNICES: For the shape required, brackets are bent to form the outline, and Jersey Wire Lath with ribs is tied thereto. False beams and pilasters are treated in like manner. (Illus. No. 25.)

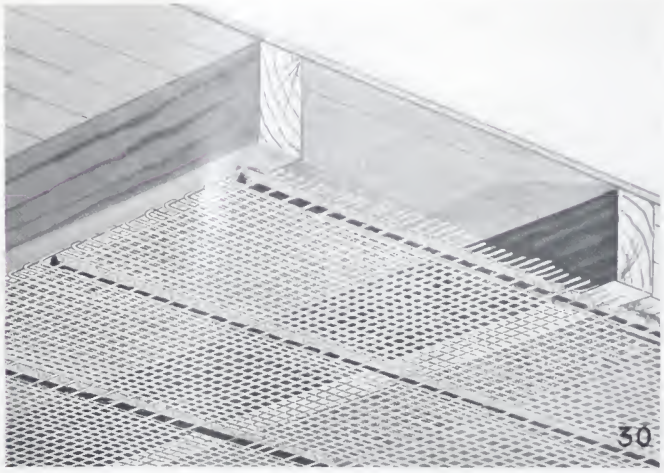
Lath with round ribs is generally used in conjunction with iron furring, although lath with V ribs is preferred by some contractors. No. 18 Galvanized wire is recommended for tying the lath to the furring. The ties should not be over 8 inches apart. The lath should lap, usually, about one inch. Provide returns at all angles where necessary.

HARD FINISH FLOORING: In the better class of fireproof buildings the rough concrete floors are finished with one of the many different kinds of hard finish composition flooring. Before the finish is applied, it is necessary to lay Wire Lath over the rough floor surface to form a binder for the composition. Jersey G. A. W. Wire Lath, (galvanized after weaving) without ribs, is used for this work and gives universal satisfaction.

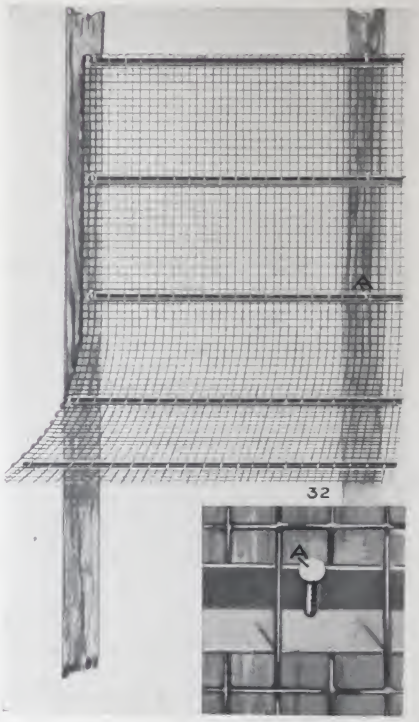
Use of Wire Lath with wood Frame



Wire Lath as applied to interior of a brick wall



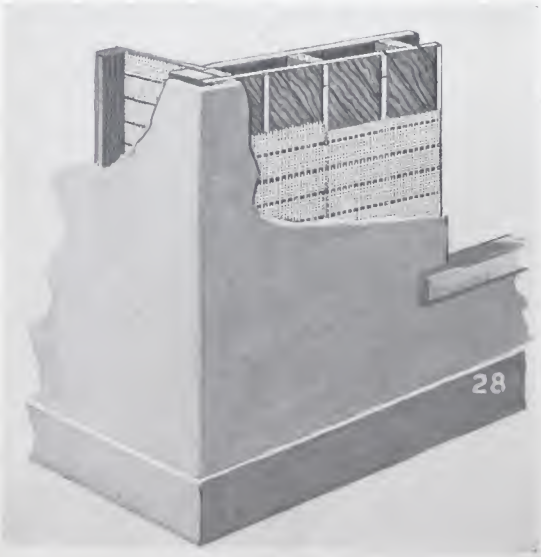
Wire Lath as applied for a ceiling



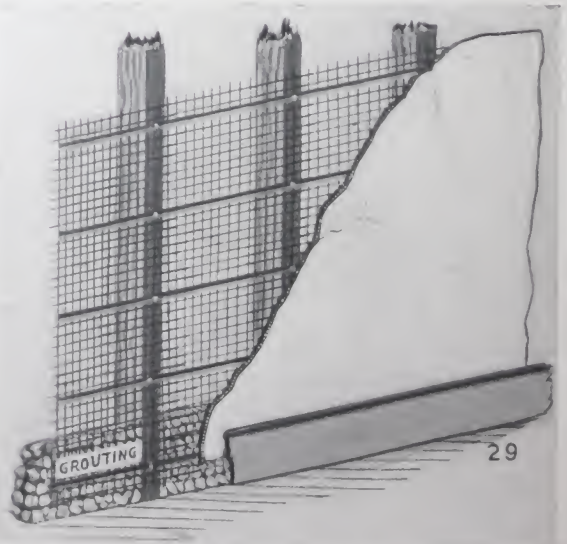
Fastening Wire Lath with nails

To draw lath flat, nails (or staples) should be driven in the direction of the loose end.

When nails are used for lath with round ribs, they are bent over with a hammer, after the pointed end is driven part way in the wood.



Stucco on Wire Lath



Wire Lath and plaster partition

How to Apply Jersey Wire Lath to the Wood of Frame Buildings

Jersey Wire Lath with V ribs spaced every 8 inches is the most approved base for the plaster of side walls, partitions, ceilings, etc., when protection from fire is desired and a plaster surface is demanded which will remain free of cracks, and will not discolor or fall.

For exterior walls, the frame can be 2 x 4 or 2 x 6 inch timber, the former being ample for small buildings. The frame is put up in the ordinary way, to which the lath can be directly attached, or the frame can be covered with wood sheathing and waterproof paper, over which strips of wood are nailed vertically, not more than 12-inch centers, as shown by Illustration No. 28 on page 18, or the wood stripping may be omitted and the lath applied directly to the wood sheathing. The detail regarding same is left to the architect or builder whose judgment may be exercised in each particular case.

If for any reason the color of the exterior wall is not satisfactory, a permanent waterproof coating can be applied, giving a finish of any color at a nominal cost.

For interior work the wire lath can be applied directly to the timbers (Illus. Nos. 29 and 30), the V ribs off-setting it, or holding it away from the timbers, or furring, if used, sufficiently to allow space behind for a continuous surface of plaster. Mortar mixed and applied in the usual way is satisfactory; also most kinds of "patent" plaster can be used with good results.

Ordinary nails are driven through the apex of the V rib, as pictured herein by Illus. No. 32. They should slant according to one side of the rib and be driven in the direction that the lath is being stretched till the head of the nail is in contact with the rib, except when applying lath with ribs deeper than ½ inch. In place of nails, wide crown staples to go across the rib can be used. One nail or staple should be driven where a rib and timber or furring are in contact. Lath should be so placed that the widths lap on timbers or furring. The lath should be put up so the ribs cross the timbers or furring. Provide returns at all angles where necessary.

Standard practice for the plastering of the inside of exterior brick, hollow tile, or stone walls, is to use Jersey Wire Lath with 1-inch V ribs (Illus. No. 31). This size is designed to form an air space between brick, stone, or hollow tile walls and the interior plaster surface, and thus prevent "damp spots" and resultant injury to decoration. It offsets the wire surface 1 inch from the wall and provides an air space about ½ inch between the plaster and the wall.

The important advantage obtained in the use of Jersey Wire Lath with ribs is that it may be applied directly to the wooden timbers, or to brick, hollow tile and stone walls, without furring, yet leaving the wire lath offset from the timbers, or walls, so that when the plaster is applied a sufficient quantity will protrude through the square mesh to form a continuous surface upon the back. This adds to the security from fire, and as the whole structure of the plaster is securely held, vertically and horizontally, the plaster wall is capable of withstanding the vibrations and sudden shocks which would loosen plaster less securely applied and cause it to fall.

How to Apply Jersey Wire Lath to the Wood of Frame Buildings—Continued

Wire Lath rolls out straight and flat so that naturally little stretching is required, but it is well to use a steel pinch bar to draw the surface smooth and even. The ends of ribs in lath with V ribs should meet on the center of timbers or furring, and thus a joint lap is obtained. Lath with round ribs also without ribs should be lapped. A special stretcher can also be made with prongs like a fork, which prongs pass through the meshes and engage with the timbers or furring. Jersey Wire Lath can readily be cut with tinner's shears. No lather will find difficulty in applying wire lath, though without previous experience.

Wire Lath Backing for Tiling

The first requisite for a wall which is to be faced with tiles, is stiffness. For this requirement Jersey Wire Lath is first choice of architects and builders. It provides the rigid support necessary for the proper quantity of cement to sufficiently imbed the tile.

Most tile jobs call for metal lath backing. Jersey Wire Lath with ribs, preferably of No. 20 wire is recommended.

It is also used to line halls, areaways, hot-air flues, etc., making such walls fire-resisting

Specifications for Rough Cast, or Stucco

Most plasterers have their own formula for mixing the material, which has proven to be satisfactory. The directions given below have been furnished by a firm of contractors who assert, that if followed, results will be approved.

The first or scratch coat of plaster should consist of limeputty, sand and Portland cement, with long hair worked into the slacked lime. The first coat should consist of one part cement, two parts sand and one part limeputty. This should be worked up in small batches as the mortar should be applied to the lath before the cement starts setting up. The first coat is to be put on the lath with sufficient pressure to thoroughly imbed the lath in the plaster. This coat is to be scratched.

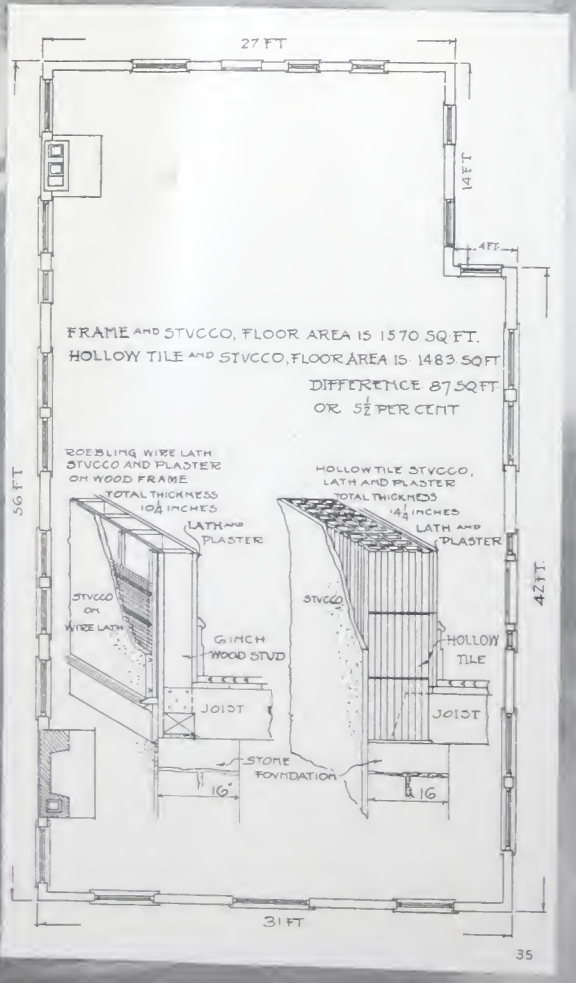
The second coat shall be applied after the first coat is thoroughly dry and shall consist of one part cement, three parts sand and one part limeputty, with less hair than the first coat.

The third or finishing coat shall consist of one part cement, four parts sand and one part limeputty. Add pebbles, crushed quartz or coarse washed sand, if rough surface is required.

The question of durability is one of the utmost importance. For outside walls, as more or less moisture sometimes finds its way to the lath, no material should be used which will be attacked or destroyed by corrosion. Ordinary paint is not a sufficient protection against this action. Actual experience has shown that unprotected lath, or even painted lath, is destroyed after a few years under unfavorable conditions. When this occurs the stucco finish will crack and, being unsupported, it becomes displaced and frequently falls away from the building.

In order to obtain durability Jersey G. A. W. Wire Lath, galvanized after weaving, should in all cases be used. The galvanizing covers the entire surface of the wire with zinc and thoroughly protects it from oxidation.

Notwithstanding that it is well known that plaster should not be applied in freezing weather, it is sometimes attempted with disastrous results; hence a word of caution.



Residence (with plan of main walls) and garage, Trenton, New Jersey
Garage described in *Country Life in America*, July 1, 1912

Comparisons

On the opposite page is shown a house of Colonial type, which was considered, when built in 1905, a superior kind of building construction, and at the present time it commands attention as a high standard of excellence. The exterior wall is made of 2 x 6 inch studs, 16-inch centers, covered with wood sheathing, building paper and furring, to which Jersey G. A. W. Wire Lath is nailed; three-coat cement plastering was applied. The net floor area is 1,570 square feet. The walls measure 10¼ inches thick. If they were made of 12-inch brick or tile walls, plastered and furred, the floor area would be decreased 87 square feet, about 5½ per cent. Is not the extra floor area worth considering in deciding on the construction of a building?

From close estimates the exterior walls of this house, at the present time (Autumn, 1914), would cost $568.90, and if the same building were built of brick the cost would be 90 to 125 per cent. more, or the cost of hollow tile plastered outside would be 75 per cent. more. The above does not include furring, lath, and plastering inside the walls.

An estimate of the cost of labor and material for the outside covering would be 11½ cents per square foot for stucco including furring, or if clapboards without furring were substituted 7 cents per square foot. Paint would be required on the clapboards, the cost of which should be added. Hence it is concluded the actual difference would be less than $100.

The garage shown on the opposite page, 30 feet long, 18 feet wide, affords space for two automobiles and a tool room on the first floor, and living quarters on the second floor. In the walls 2 x 4 inch studs were placed 16-inch centers, to which was nailed Jersey Wire Lath with V ribs, galvanized outside and painted inside.

On the outside, stucco, and on the inside ordinary plaster was applied. No sheathing or furring was used. Considering its cost, floor area and general efficiency, unquestionably it could not be built of other material with as satisfactory results.

The buildings described above are classed as fireproof with buildings of which the walls are stone, brick or hollow tile, and are insured at the same rate of premium.

It required only 280 square yards of Galvanized Lath for the exterior walls of the house and 113 yards for the garage, so it will be seen a difference in the cost per square yard between Jersey Lath and some inferior Lath is not worthy of consideration, compared with the importance of the use of the best material.

Insuring Permanency of Decoration

Plaster being the surface which is visible, and upon which costly decoration is applied, it is important that the surface continue immune from cracks, abrasions and discolorations. Plaster, too, having large fireproofing qualities when applied on Jersey Wire Lath, no small difference in cost should preclude its use or allow the substitution of a less protective plastering base.

The serious hazard met in the use of wooden lath, which is so combustible, should deny consideration of it. Equally important is the danger from falling plaster and consequent

Comparisons—Continued

damage to furniture and liability of costly repairs. On wood lath, the plaster is largely on the face, the key never being a large factor in the bulk of the wall, and always constitutes a small element of strength which is less secure as the lath becomes dry and shrinks.

The application of Jersey Wire Lath is quick, for the units are large, whereas, with wooden lath, and in some other forms of lath, there is a multiplicity of small units which require greater time to put up, and with corresponding increase in the number of laps or joints, and resulting weakness and waste of material. Consider the extra material required due to laps occasioned by small sections of metal lath.

The advantage possessed by Jersey Wire Lath over the several forms of expanded metal is the great contrast in strength of drawn wire, woven into a strong, close-knit fabric, with interwoven stiffening ribs, as against a rolled sheet metal surface, squeezed thin, and weakened at a thousand points from the cutting and expanding process. Expanded metal, when galvanized, is coated before the punch press cuts the openings. The cuts leave raw and exposed edges without protection of galvanizing, for the action of the elements to begin destruction and disintegration. Also the edges of the expanded metal are so sharp as to cause injury to the hands of workmen applying same.

Sheet metal lath, so called, is made from rolled sheet steel, and has openings for the plaster key, either punched or cut through the sheet. The lath is not expanded and the sheet of lath is the same area as the original rolled sheet before the punch press has cut the small openings. The objection to this material comes from the large amount of space on the rolled sheet which has no keyside, or backing, whatsoever, and the great amount of metal upon the reverse side that is unprotected by plaster and therefore is liable to corrosion. Also in event of a fire, walls upon which the plaster is applied to sheet metal lath are a constant menace, as when water is applied, causing sudden contraction, the plaster is likely to immediately peel off. In the use of Jersey Wire Lath all material is disposed of in accordance with scientific principles. The mortar forms a continuous surface at the back, and the wire is completely imbedded.

It is frequently urged that certain varieties of sheet metal lath require less mortar than Jersey Wire Lath, and the reduced cost of plastering on such other laths is advanced as an argument in their favor. Reflect, however, that as plaster is the fire-resisting material and the office of the lath is simply to hold it in position and prevent it from falling away in the case of fire or vibration, it is evident that if the quantity of the plaster be reduced, the protection it affords will be correspondingly diminished. In this connection, it should be noted that hollow tile and most kinds of metal lath require as much plaster as Jersey Wire Lath, but it is not uniformly distributed. Blocks of hollow tile lack uniformity in shape, hence they do not make smooth walls and the cavities must be filled with mortar to obtain an even surface. In wire lath the strands are imbedded and the mortar is spread over the whole back surface, while in other kinds the mortar is applied in lumps as a "key," and these, if spread out flat, would make a surface of considerable thickness at the back. It should also be noted that the thickness of the wall can, to a large degree, be regulated by the plasterer.

Comparisons—Concluded

Rust is a Canker that Destroys

Other kinds of metal lath are rarely offered as galvanized after being fabricated, the expense of coating being prohibitive. It is, however, often contended that the extra thickness of the iron makes the heavy coating unnecessary. Such, however, is a fallacy, as it will be readily understood that when iron is attacked by rust the extra amount of metal will not materially retard the rapid destruction of the whole mass. Zinc applied by the hot process after fabrication is the factor contributing to complete resistance of corrosion and therefore to durability.

It should also be noted that there is a difference in "galvanizing." The deposit of zinc as applied by some processes is so thin as to add only nominally to the weight and proportionately to the durability. All of Jersey Galvanized Wire Lath is coated by the hot process, and it is an undisputed fact that this process applies the heaviest deposit.

Plaster board and flat wood lathing (also stamped sheet metal used without plaster for ceilings) are not entitled to serious consideration, as each has only its low cost to recommend its use. Only a thin coating of plaster may be applied, and this in itself is sufficient to deny it consideration, since it does not afford the measure of fire protection to be expected from real plastering. Being very thin it does not deaden sound. As a rule such material is used only in building of very low cost, where cheapness is a primary requirement. The fact that mortar cannot pass through it and form a "clinch" or "key" at the back makes it undesirable for buildings of permanent character.

Jersey Wire Lath partitions are preferable to hollow tiles, as hollow tiles require more floor space, and tile partitions are of excessive weight, requiring proportionately heavier frame work, also when a building settles the joints between tiles sometimes open up.

Where stone, brick, cement blocks, or tile are used for the exterior walls, the walls are much thicker than where timber, wire lath and stucco are employed. Commonly 12 inches is the thickness of the material for the first floor of a dwelling house constructed of brick, cement blocks or tile. In addition there should be added several inches for the furring, and in case of tile, the exterior stucco finish, making the total thickness 14¼ inches or more. The thickness of the walls of a frame house, with stucco finish will not exceed 10¼ inches, and this may be reduced by using smaller timber and omitting the sheathing. Note what this means to the size of the rooms.

In order to prevent dampness, tile, and in many cases brick, stone and cement block buildings require the inside of the main walls furred out so an air space will be formed back of the plaster. This increases the expense by the cost of the furring. Also, it will be noticed where the main walls are built of tile the exterior must be given a coat of stucco, which is held in place simply by adhesion, and it frequently occurs that this becomes detached when exposed to dampness or vibration, frost or a sudden shock.

From the foregoing evidence it is believed that the jury, composed of intelligent owners, architects and contractors, will determine upon a verdict favorable to the use of Jersey Wire Lath, and that all will approve its designation as "The Acknowledged Standard."

List of Jersey Wire Lath

Made of Steel Wire

Standard rolls 50 yards long except lath with V ribs ¾ inch and deeper, rolls of which are 25 yards long

"G.A.W." GALVANIZED AFTER WEAVING

No.	Mesh	Size Wire	Ribs	Stock Widths		
2–18–O–G	2	18(.047)	None	36 in.	Per sq. yd.	cents
20–O–G	2½	20(.035)	None	36 in.	" " "	cents
18–6V–G	2½	18(.047)	⅜ in. V	32, 36 in.	" " "	cents
20–6V–G	2½	20(.035)	⅜ in. V	32, 36 in.	" " "	cents
20–3R–G	2½	20(.035)	3/16 in. round	33, 37, 49 in.	" " "	cents

PAINTED BLACK

20–6V–P	2½	20(.035)	⅜ in. V	32, 36 in	" " "	cents
20–16–V–P	2½	20(.035)	1 in. V	36 in.	" " "	cents
20–3R–P	2½	20(.035)	3/16 in. round	33, 37, 49 in.	" " "	cents

All lath with V ribs is woven ⅝–inch wider than specified above; the widths given are the length of the ribs beyond which the fabric extends 5/16–inch at each side. The 2½–mesh lath without ribs is woven one extra mesh (about ⅜–inch) in width. The extra width permits a lap joint when applied to wood without any loss of area. Lath 36–inches wide is required for timbers or furring 12–inch centers; 32–inch for 16–inch centers; 33, 37, 49 inches for 16, 12 or 18–inch centers allowing for laps.

All "Stock Widths" are carried in stock at our works at Roebling, N. J. We also carry in stock at each store such "Stock Widths" as are required in that section. We will quote on lath not listed above for prompt shipment made to order. Samples and prices furnished on request.

Table of Areas

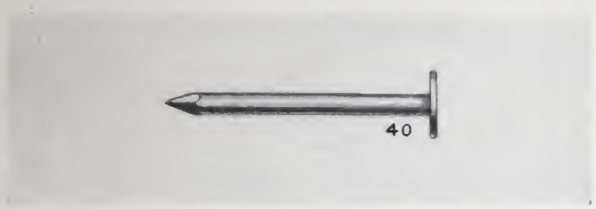
	Width 32 in.	Width 33 in.	Width 36 in.	Width 37 in.	Width 48 in.	Width 49 in.
Roll, 150 lin. ft., equals (in sq. ft.)	400.	412.5	450.	462.5	600.	612.5
Roll, 150 lin. ft., equals (in sq. yds.)	44.444	45.833	50.00	51.388	66.666	68.055
1000 lin ft. equals (in sq. yds.)	296.296	305.555	333.333	342.592	444.444	453.703
1000 sq. yds. equals (in lin. ft.)	3375.	3272.73	3000.	2918.92	2250.	2204.09

Nails, Staples or Wire Required For Wire Lath

(Based on 10 pounds per 1000 square yards.)

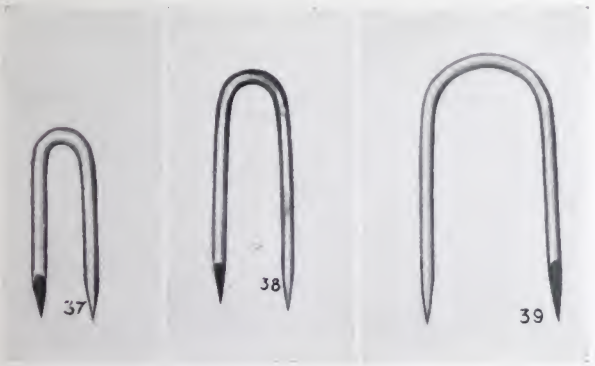
	Width 32 in.	Width 33 in.	Width 36 in.	Width 37 in.	Width 48 in.	Width 49 in.
Roll, 150 lin. ft., requires (in lbs.)	4.44	4.58	5.00	5.14	6.67	6.80
1000 lin. ft. requires (in lbs.)	29.6	30.5	33.3	34.2	44.4	45.4

Sundries



Wire Nail

WIRE NAILS for fastening lath with V ribs to wood.
1½ in. No. 11 Slating.
Per pound, cents.
Count 180 to a pound.
*10 pounds required for 100 yards.



Galvanized Staples

GALVANIZED STAPLES for fastening lath with V ribs to wood. (Illustration No. 39).
1¼ x ½ in. No. 14.
Per pound, cents.
Count 195 to a pound.
*10 pounds required for 100 yards.

GALVANIZED STAPLES for fastening lath without ribs to wood. (Illustration No. 37).
⅞ in. No. 14.
Per pound, cents.
Count 400 to a pound.
*10 pounds required for 100 yards.

GALVANIZED STAPLES for fastening lath with $\frac{3}{16}$ in. round ribs to wood. (Illustration No. 38).
1⅛ in. No. 14.
Per pound, cents.
Count 375 to a pound.
*10 pounds required for 100 yards.

ROEBLING GALVANIZED STEEL TIE WIRE for fastening lath to metal furring, No. 18 (.047 in. diameter).
Per pound, cents.
In bundles of 100 lbs., random lengths about 6 feet long, or in coils of continuous lengths of 12 lbs.
160 feet to a pound; 1000 feet weighs 6¼ pounds.
*10 pounds required for 100 yards; ties 8 in. apart.

ROEBLING GALVANIZED ANNEALED STEEL WIRE for tying furring to cross furring.
No. 14 (.080 in. diameter).
Per pound, cents.
In coils about 100 pounds.
60 feet to a pound; 1000 feet weighs 16⅔ pounds.

ROEBLING DOUBLE GALVANIZED B. B. ANNEALED STEEL WIRE used for hangers which should be placed intermediately between I-beams spaced over 5 feet apart to reinforce the furring.
No. 10 (.135 in. diameter).
Per pound, cents.
In coils of about 100 pounds.
20 feet to a pound; 1000 feet weighs 50 pounds.

Steel Pinch Bar

STEEL PINCH BARS for drawing lath flat and smooth.
Made of cast steel.
30 inches long, ¾ in. diameter.
Each $

Steel Shears

STEEL SHEARS for cutting lath and sheet metal.
Length of cut, 3 inches; total length 12¾ inches.
Each $

*NOTE. The quantities specified are in excess of what is actually required, provided there is no waste, but it is generally understood that it is not practicable for workmen to exercise that care as would be necessary to utilize every staple, nail or inch of wire. Rather than cause delay through a scant supply, the quantities specified are liberal. Any surplus can be used for other work, or returned.

Architects' Draught of Specifications

"Nothing Similar is the Same"

It frequently happens in the draught of specifications for buildings, that the protection afforded in a choice of good material is nullified by the words, "or equal." This is undoubtedly provided to give the builder the benefit of competitive bids. More often it opens the door for a poor job.

Inferior material, represented as being "just as good" may prove a risk and a menace and the result of its use a serious loss.

Specify: Jersey Wire Lath, No . . . . . .

It is "time tried and fire tested."

Remember, it invariably insures the best results.

Accept no other.

Roll Jersey Wire Lath

Jersey Boiler Covering Fabric

2½ MESH No. 20(.035) WIRE

Standard rolls 50 yards long

No.	Finish	Ribs		
20-6V-P	Painted	⅜-in. V Rib	Per Square yard	cents.

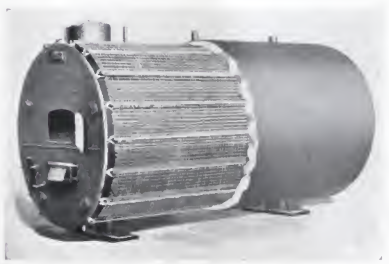
Standard rolls 25 yards long

20-12V-P	Painted	¾-in. V Ribs	Per Square yard	cents.
20-16V-P	"	1-in. V "	"	"
20-24V-P	"	1½-in. V "	"	"
20-16V-G	Galv. After.	1-in. V "	"	"

Stock width, 36 inches.

Protection for the shell of boilers, and retention of heat within the boiler itself, are accomplished by covering boilers with a plastic compound of which asbestos is a commonly used material. For this work Jersey Wire Lath, with ⅜-inch, ¾-inch, 1-inch,or 1½-inch V ribs integrally woven, is used. Thus any required air space, to separate the boiler itself from the covering material may be obtained.

In addition to the use of Jersey Wire Lath, which is used to offset the plastic covering and to provide a "clinch," it is sometimes desirable to use wire lath without ribs, or poultry netting, 2-inch mesh No. 19, to hold together a very thick mass of plastic material, or covering made up of short fibre material.



When an air space is not required in the covering of boilers, lath without ribs, or poultry netting, is applied directly to the boiler and the coating applied over it.